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(71) Applicant (for all designated States except US): **DOW
GLOBAL TECHNOLOGIES INC.** [US/US]; Washing-
ton Street, 1790 Building, Midland, MI 48674 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LI, Cheng, G.**
[US/US]; 2847 Briarwood Drive, Troy, MI 48085 (US).
ZIEBARTH, Robin, P. [US/US]; 5902 Wildflower

Circle, Midland, MI 48642 (US). **CORNELL, Martin,**
C. [US/US]; 333 Timbercreek Drive, Lake Jackson, TX
77566 (US). **SWARTZMILLER, Steven, B.** [US/US];
5680 Golf Pointe Drive, Clarkston, MI 48348 (US).

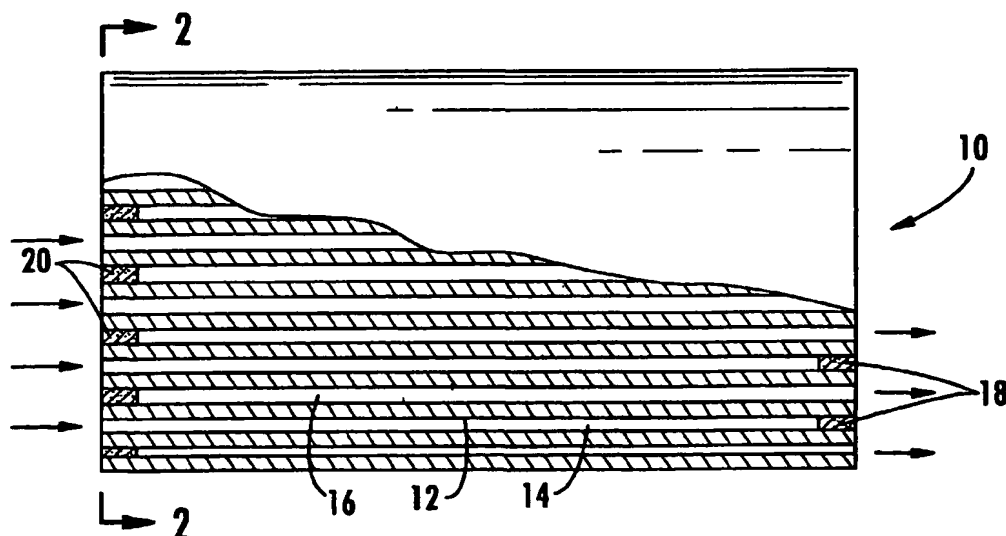
(74) Agent: **STEVENS, Timothy, S.**; 5108 Foxpoint Circle,
Midland, MI 48642 (US).

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(54) Title: IMPROVED DIESEL EXHAUST FILTER



(57) Abstract: An improved Diesel exhaust filter element of the type having a rigid porous wall portion formed of an acicular ceramic (such as acicular mullite), the porous wall portion having a first side and a second side, the porous wall portion being coated with a precious metal catalyst and a NO_x absorbent, such that when exhaust gas from a Diesel engine is flowed through the rigid porous wall from the first side to the second side, the exhaust gas containing excess oxygen, NO_x and soot, the soot in the exhaust gas is trapped within the rigid porous wall and catalytically oxidized to carbon dioxide, the NO is catalytically oxidized to NO_2 , which NO_2 is then absorbed by the NO_x absorbent, and such that when the exhaust gas is caused to contain excess hydrocarbon and carbon monoxide, then the NO_x absorbent is regenerated and the remaining hydrocarbon and carbon monoxide are catalytically converted to nitrogen and carbon dioxide. In addition, a process for depositing precipitated metal ions on the surfaces of such a rigid porous wall.



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